

# STEP Modularization Project Draft Plan

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# Overview

- Objectives
- Sources of requirements
- Major project deliverables
- Plans for 1999
- Plans for 2000 and beyond

# Objectives

- Provide infrastructural technologies needed for development and use of STEP modules
- Add modules support to existing NIST tools and services
- Continue limited STEP AP210 publishing support through IS ballot cycle

# Sources of requirements

*From PDES, Inc.*

- Industrial Framework Model - a blueprint for categorizing modules
- NIST Modules Repository Requirements Specification
- Catalog demo - a prototype tool for navigating modules

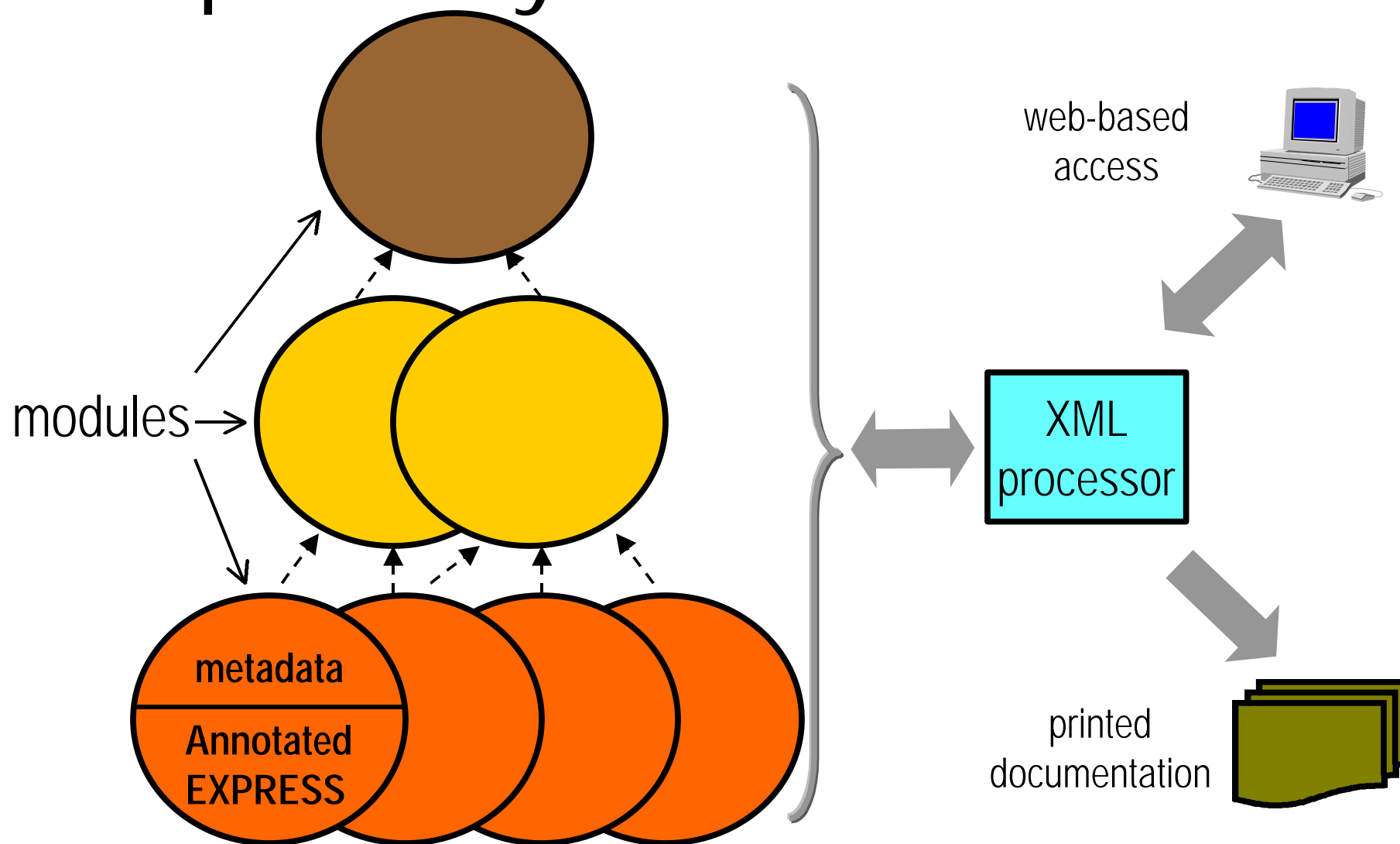
# Major project deliverables

- Modules repository for accessing module documentation and metadata
- Methodologies for creation and use of STEP modules
- Extensions to NIST short-to-long form generator and EXPRESS Server
- “Plug-and-play” tools for building STEP information models

# Modules repository architecture

- Data represented using XML
- Module documents represented using EXPRESS-driven document type definition
- Metadata represented using RDF (the Resource Description Framework)
- Repository accessible over the web
- Repository needs to operate offline as well

# Repository structure



# DTD design principles

- Based on EXPRESS language grammar
- Independence of supplementary directives and ISO documentation guidelines
- Support multiple forms of delivery from same source document
  - Hypertext
  - ISO document
  - Others (EXPRESS-G?, "Circles and Arrows" diagrams?)

# DTD structure

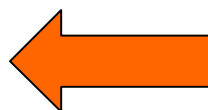
- Catalog info

- ARM

- Interfaces

- Types

- Entities ...



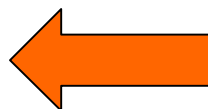
- Mapping

- MIM

- Interfaces

- Types

- Entities ...



Driven by EXPRESS  
language grammar

# Plans for 1999

- Develop XML representation for modules
- Implement initial version of repository
- Complete module development and usage guidelines
- Add modules support to NIST EXPRESS Server and short-to-long-form generator
- Support legacy tools and services

# Plans for 2000 and beyond

- Define requirements for “plug-and-play” information model development
- Design and implement modeling tools (e.g. rules editor)
- Enhance capabilities of modules repository
- Support EXPRESS version 2

# Progress so far

- Repository design document underway
- Related work - PSL/XML mapping
- Rule writing assistant being developed for AP210
- EXPRESS Web Server released  
(<http://www.nist.gov/express-server>)